

Claims

- [c1] 1.A two-dimensional laser projection system comprising:
- (a)a laser light source for producing a laser beam;
 - (b)a horizontal scan mirror comprising a rotatable element having a plurality of planar reflecting surfaces arranged such that the element has a symmetrical polygonal horizontal cross-section;
 - (c)a vertical scan mirror comprising a rotatable element having a plurality of planar reflecting surfaces arranged such that the element has a symmetrical polygonal vertical cross-section;
 - (d)wherein the laser beam is reflected between the horizontal scan mirror and the vertical scan mirror and onto a projection surface or space.
- [c2] 2.The system of claim 1 further comprising means for intermittently turning the laser light source on and off.
- [c3] 3.A method of projecting a two-dimensional laser image comprising the steps of:
- (a)projecting a laser beam onto a horizontal scan mirror comprising a rotatable element having a plurality of planar reflecting surfaces arranged such that the element has a symmetrical polygonal horizontal cross-section,

while rotating the horizontal scan mirror such that the laser beam oscillates horizontally at a frequency equal to the rotational speed of the horizontal scan mirror multiplied by the number of vertically planar reflecting surfaces;

(b) positioning a vertical scan mirror comprising a rotatable element having a plurality of planar reflecting surfaces arranged such that the element has a symmetrical polygonal vertical cross-section such that each planar reflecting surface receives the horizontally oscillating laser beam; and

(c) rotating the vertical scan mirror such that the laser beam oscillates vertically with a frequency equal to the rotational speed of the vertical scan mirror multiplied by the number of planar reflecting surfaces.

[c4] 4. The method of claim 3 further comprising the step of intermittently turning the laser beam on and off to create a two-dimensional image.